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A23G A23L

(54) Manufacture of confection

(57) In a process for the manufacture of an edible product comprising a sucrous body mass and a filling mass, an inverted cup-shaped punch (3) with a sieve-like base (5) driven into a heap of mouldable powder (1) e.g. maize starch powder having a smoothed surface (2) thereby forming a shaped recess (4) consisting of a jacket-forming cavity with a core (7) compacted to a lower level than the surface (2). The sucrous body mass is poured into the shaped recess (4) to fill the cavity and cover the core (7), thereby forming an inverted cup, which is turned over the filling mass which may comprise a soft sucrous mass or alcohol saturated fruit.

Fig.1

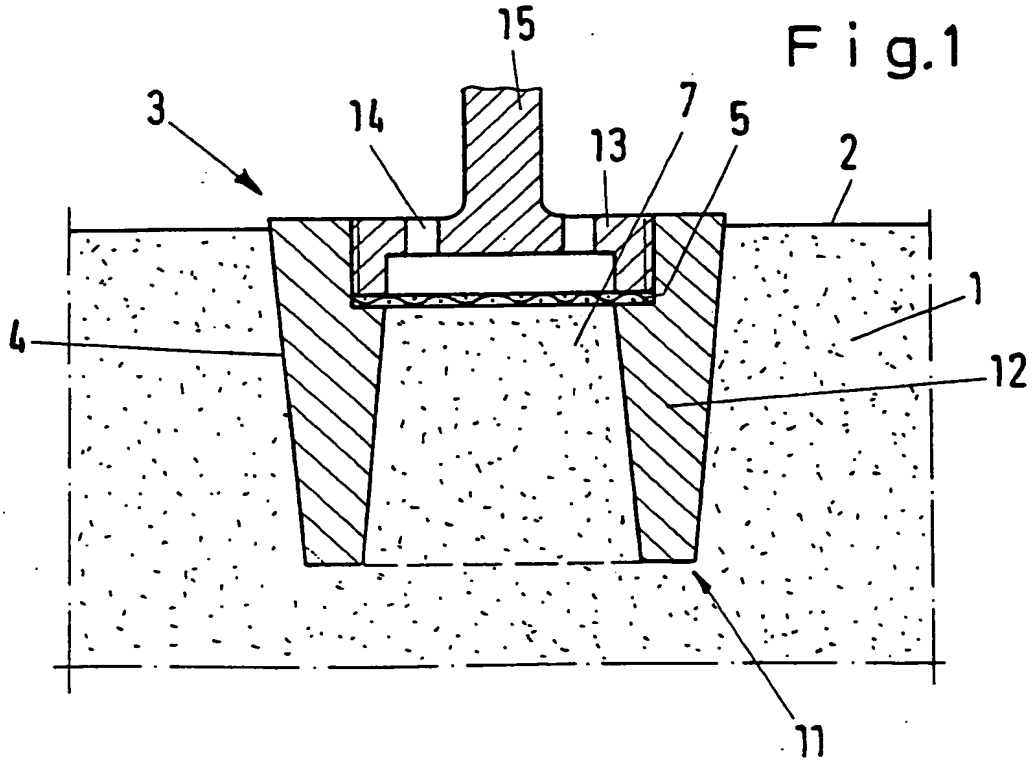

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Fig.1

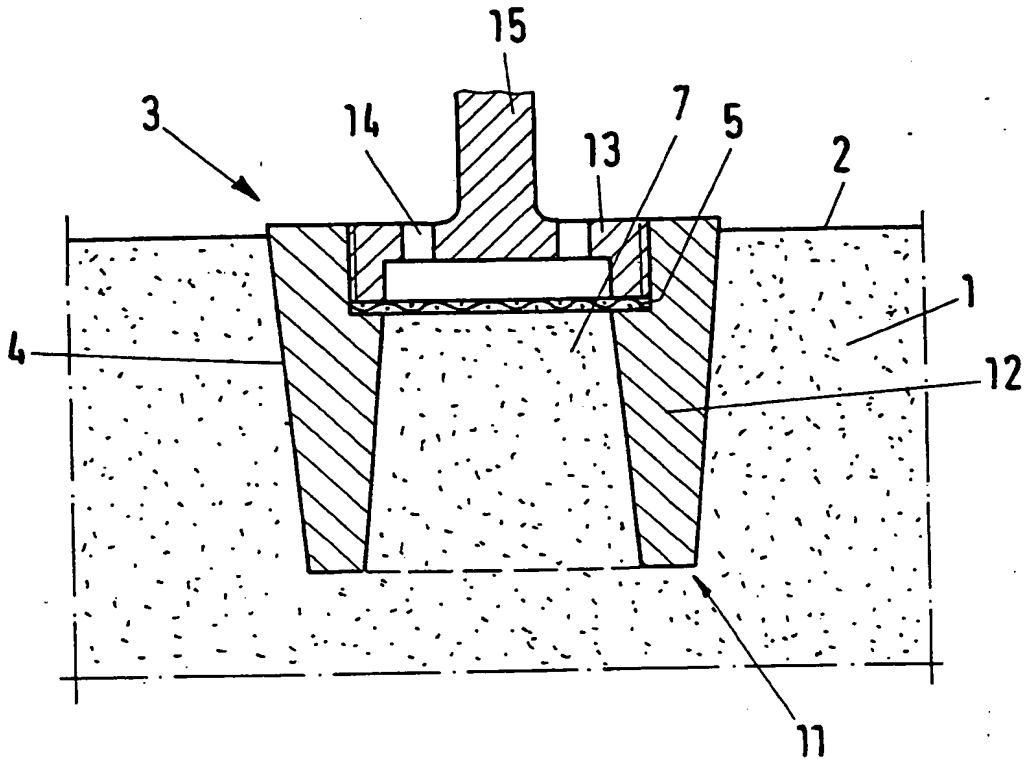

Fig.2

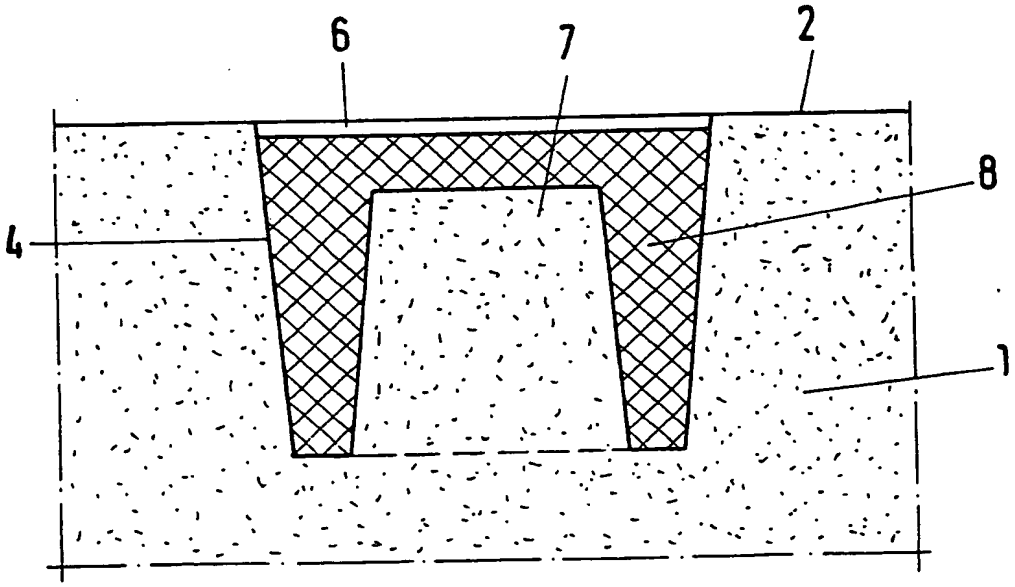

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Fig.3

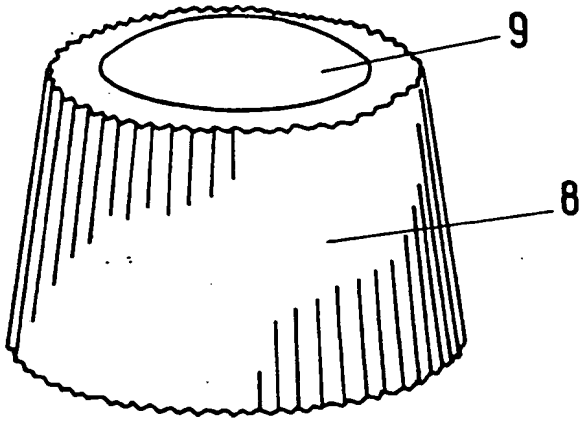


Fig.4

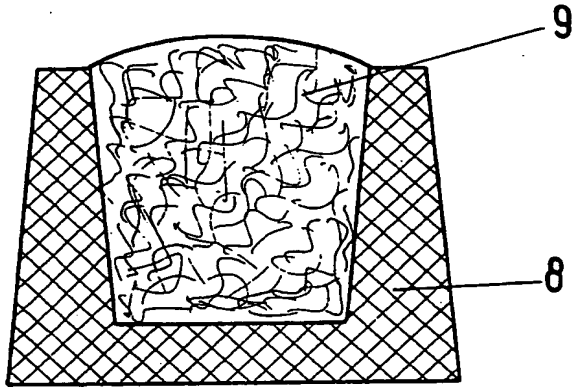
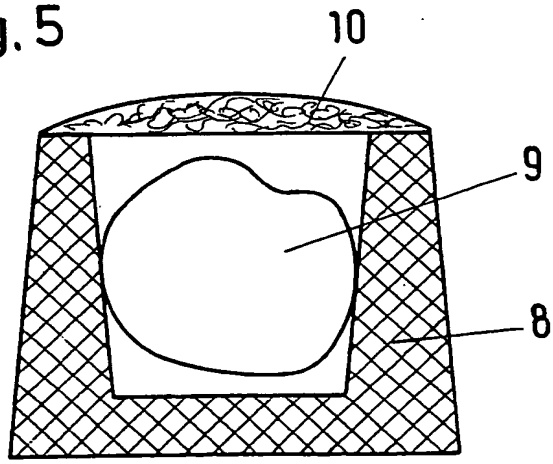


Fig.5



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MANUFACTURE OF EDIBLE PRODUCT

This invention relates to a process for the manufacture of an edible product comprising a sucrous body mass and a filling mass, in which at least one punch is driven into a heap of mouldable powder having a smoothed surface, thereby forming at least one shaped recess in the heap, a melted sucrous body mass containing a gelatiniser is poured into the shaped recess and allowed to harden therein to a soft gummy consistency, and the filling mass is then conjoined to the sucrous body mass.

The heap of mouldable powder is an essential feature of the manufacture of such products. It consists generally and preferably of maize starch. The term sucrous body mass containing a gelatiniser refers to the substances from which are made wine gums, fruit gums, non-pharmaceutical liquorice products and the like. The sugar can have the chemical composition generally used in food products, but it can also be grape sugar or a so-called sugar substitute, i.e., a sugar suitable also for diabetics.

The invention also relates to a device for carrying out the process.

In a known process of this type, use is made of an embossed indentation tool, known technically as a solid punch. The shaped recess assumes a complementary form. The products are correspondingly cavity-free, and can for example be more or less flat or voluminous. The filling mass, which can also consist wholly or largely of sugar, is simply laid on and adhesively bonded to the sucrous body mass. The sucrous body

mass itself can be adapted as the adhesive.

Other edible products containing sugar, such as pralines, are known in another form. They consist for example of a cup of chocolate, which is filled with some other mass and provided with a lid of chocolate or the like. The manufacturing technology applied in this case cannot be adapted to the manufacture of edible products from sucrous body masses as initially defined. Nevertheless, the range of products that could be manufactured from a sucrous body mass and a filling mass as defined could be greatly extended if a cup could be formed from the sucrous body mass, since the cup form would permit combinations with filling masses which could not be manipulated by a simple laying on and adhesive bonding technique. The combinations could be so adapted that the products, for example pralines or bonbons, could be manipulated.

An object of the invention is to adapt the process initially described so that the sucrous body mass can be formed into a cup and the cup can be filled with any desired filling mass. Another object of the invention is to provide a device whereby the process can be carried out in a particularly simple manner.

According to one aspect of the present invention, in the process initially described, the punch is of inverted cup-shape with a sieve-like cup base, the punch is driven into the heap with its cup mouth foremost, thereby forming a shaped recess consisting of a jacket-forming cavity with a core compacted to a lower level than the surface of the heap, the sucrous body mass is poured into the shaped recess so as to

fill the cavity and cover the core, and allowed to harden therein in the form of an inverted cup, which is subsequently turned the other way up, the filling mass is poured into the cup.

The shaped recess formed in the heap by the cup-shaped punch is preferably tapered, with the cavity wall sloping outwards from bottom to top and the core wall sloping inwards from bottom to top.

Under the invention, the cup can have a consistency more or less like a soft gum and can be filled with any desired filling mass. The filling mass can be poured into or laid in the cup, and can consist for example of chocolate, nougat, another sucrous mass of different taste, fruit saturated with brandy for example, a fruit cream or even an ice-cream. The process of the invention is particularly adapted to the manufacture of products in which a cup of sucrous body mass contains a softer filling mass which would not withstand manipulation like a praline or a bonbon. The consistency of the filling mass used in the process of the invention must obviously be such that it will not pour out of the cup unless it is held in place by a cover. Alternatively, however, one can use quite fluid filling masses by securing them with a cover which can be placed on or poured over the filling.

The accruing advantages are to be seen in that the invention provides a product which consists substantially of a sucrous body mass but is constructed like a praline and can be handled like a praline or a bonbon. This greatly extends the

range of sweetmeats that can be manufactured from sucrous body masses. Within the context of the invention, the geometrical form of the cup is fundamentally unlimited. The cup can be round, oval or polygonal in cross-section. The outer surface of the cup can easily be decorated, within the limits imposed by the punch design requirements. One particular advantage is the simplicity of manufacture of the novel products, i.e., by means fundamentally akin to the proven technology for the manufacture of products from a sucrous body mass, incorporating the use of a heap of mouldable powder, though the new products are completely different in form.

According to another aspect of the invention, a device for use in carrying out the said process comprises a punch of inverted cup-shape having a mouth defined by the lower rim of a jacket portion, and a sieve-like cup base backed by an inverted cup-like portion which has at least one air vent and is attached to a manipulator. The cup-like portion is preferably screwed into the jacket portion and the sieve-like cup base is replaceably held in the jacket portion by the cup-like portion.

Both aspects of the invention will now be described with reference to the accompanying drawings, in which:

Figure 1 is a vertical section through a punch for carrying out the process of the invention shown forming an impression in a heap of mouldable powder;

Figure 2 is a vertical section through the shaped recess formed as in Figure 1 and filled with sucrous body mass;

Figure 3 is a perspective view of a product

manufactured by the process of the invention;

Figure 4 is a vertical section through the product shown in Figure 3; and

Figure 5 corresponds to Figure 4 but shows another embodiment of product manufactured by the process of the invention.

Figure 1 shows that initially in the process of the invention a punch 3 is driven into a heap 1 of mouldable powder having a smoothed surface 2, thereby forming a shaped recess 4 in the heap. It is self-evident that a plurality of punches 3 can be actuated simultaneously to form a plurality of adjacent shaped recesses 4.

It can be seen that, in accordance with the invention, the punch 3 is of inverted cup-shape with a sieve-like cup base 5, and is driven into the heap 1 with its cup mouth foremost, thereby forming the shaped recess 4 as a jacket-forming cavity 6 with a core 7 compacted to a lower level than the surface 2 of the heap 1. A sucrous body mass is poured into this shaped recess 4 so as to fill the cavity 6 and cover the core 7, as shown in Figure 2. In this way an inverted cup 8 is formed, into which the filling mass 9 will later be poured. The finished product 8, 9 is shown in Figures 3 and 4. The shaped recess formed by the cup-shaped punch 3 has its cavity 6 broadening conically from bottom to top and its core 7 tapering conically inwards from bottom to top.

Figure 4 shows the finished product in cross-section. The filling mass 9 in the cup 8 can be another sucrous mass of a softer consistency than the sucrous body mass forming the

cup 8, and different therefrom in taste. On the other hand, Figure 5 shows that the cup 8 can be filled with a filling mass in the form for example of fruit 9 saturated with alcohol, and in then provided with a cover 10.

Figure 1 also shows that the punch 3 has a mouth defined by the lower rim 11 of a jacket portion 12 the sieve-like cup base 5 already referred to, together with an inverted cup-like portion 13 at the top, which has air vents 14 and is attached to a manipulator 15. The cup-like portion 13 is screwed into the jacket portion 12 and the sieve-like cup base 5 is replaceably held in the jacket portion 12 by the cup-like portion 13. It is self-evident that the sieve-like cup base 5 will be replaced when it has become clogged with stray mouldable powder particles from the heap 1.

CLAIMS

1. A process for the manufacture of an edible product comprising a sucrous body mass and a filling mass in which at least one punch is driven into a heap of mouldable powder having a smoothed surface, thereby forming at least one shaped recess in the heap, a melted sucrous body mass containing a gelatiniser is poured into a shaped recess and allowed to harden therein to a soft gummy consistency, and the filling mass is then conjoined to the sucrous body mass, and wherein the punch is of inverted cup-shape with a sieve-like cup base, the punch is driven into the heap with its cup mount foremost, thereby forming a shaped recess consisting of a jacket-forming cavity with a core compacted to a lower level than the surface of the heap, the sucrous body mass is poured into the shaped recess so as to fill the jacket cavity and cover the core, and allowed to harden therein in the form of an inverted cup, which is subsequently turned the other way up and the filling mass is poured into the cup.

2. A process as in Claim 1, wherein the shaped recess formed in the heap by the cup-shaped punch is tapered, with the cavity wall sloping outwards from the bottom to top and the core wall sloping inwards from bottom to top.

3. A process as in Claim 1 or Claim 2, wherein the cup of sucrous body mass is filled with a filling mass of softer consistency.

4. A process as in Claim 3, wherein the filling mass is a softer sucrous mass.

5. A process as in Claim 3, wherein the filling mass

is fruit saturated with alcohol, and the cup of sucrous body mass is provided with a cover.

6. A process as in any of Claims 1 to 5 and substantially as hereinbefore described with reference to the acompanying drawings.

7. A device for use in carrying out the process as in any one of Claims 1 to 5 comprising a punch of inverted cup-shape having a mouth defined by the lower rim of a jacket portion, and a sieve-like cup base backed by an inverted cup-like portion which has at least one air vent and is attached to a manipulator.

8. A device as in Claim 7, wherein th cup-like portion is screwed into the jacket portion, and the sieve-like cup base is replaceably held in the jacket portion by the cup-like portion.

9. A device for use in the manufacture of an edible product comprising a sucrous body mass and a filling mass substantially as hereinbefore described with reference to Figure 1 of the accompanying drawings.